

Remarks

Applicant respectfully requests reconsideration of this application. Claims 50 and 54 have been amended to more distinctly claim the presently invented subject matter. Claims 55-57, 93, and 103 have been amended to overcome minor informalities. No claims have been allowed.

Information Disclosure Statement

Applicant wishes to bring to the attention of the Examiner the existence of the following related divisional applications: Serial No. 09/961,235, filed 9/20/01; Serial No. 09/574,563, filed 5/17/00 (now U.S. Pat. No. 6,570,219); and Serial No. 09/961,221, filed 9/20/01.

Claim Objections

Claims 93-111 were objected to because independent claims 93 and 103 contain a minor typographical error ("a" should be "an"). Applicant has amended claims 93 and 103 to correct this minor informality.

Non-Art Rejections - 35 U.S.C. § 112

Claims 93-102 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite because of a minor grammatical error. Appropriate correction has been made to independent claim 93.

Claims 50-57 stand rejected under 35 U.S.C. § 101 for double patenting in view of claims 1-7 of prior U.S. Patent No. 6,207,994. Applicant has amended claims 50 and 54-57 so that claims 50-57 of the instant invention is not the same as claims 1-7 of U.S. Patent No. 6,207,994.

Accordingly, it is respectfully submitted that all claims now fully satisfy the requirements of 35 U.S.C. §§ 101 and 112.

Art Rejections - 35 U.S.C. § 103(a)

Claims 93-95 and 99-111 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Williams et al. (US 5,386,136; "Williams") in view of Yamanishi, et al. (JP404107877A; "Yamanishi"), or alternatively, obvious over Yamanishi in view of Williams.

Additionally, claims 96-98 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Williams in view of Yamanishi, or in the alternative, as being obvious over Yamanishi in view of Williams, and further in view of Colak (US 4,626,879; "Colak").

Applicant respectfully submits that *prima facie* obviousness is absent because (1) there is no suggestion, teaching, or motivation to modify or combine the cited references so as to arrive at the claimed invention; (2) there is no reasonable expectation of success by the hypothetical person of ordinary skill in the art at the time the invention was made that the proposed combination or modification would work to produce beneficial results; and (3) the prior art fails to teach or suggest all of the elements and limitations recited in the claims.

A person of ordinary skill following the teachings would have lacked any reasonable expectation of success of attaining Applicant's invention since Yamanishi's dopant desegregation processing technique was known to be highly unpredictable and very difficult to control. Furthermore, Yamanishi's device is inoperative to provide a HVFET device with first and second extended drain conduction channels.

With respect to amended claims 93 and 103, a person of ordinary skill would certainly have lacked any expectation of success in attaining an HVFET with a "channel formed above the buried layer having an impurity concentration of approximately $1 \times 10^{12}/\text{cm}^2$ ". Neither Yamanishi nor Williams teach, disclose or

suggest a HVFET with an upper conduction channel having "an impurity concentration of approximately $1 \times 10^{12}/\text{cm}^2$ " as recited, in amended claims 93 and 103. Indeed, Yamanishi is completely silent as to the impurity concentration in his N-type construction at the surface of the substrate.

The existence of first and second conduction channels is not inherent in Yamanishi's device structure. A retrospective view of Inherency is not a substitute for some teaching or suggestion which supports the selection and use of the various elements in the particular claimed combination. An allegedly inherent characteristic must *necessarily* flow from the teachings of the applied prior art. In this case, there is no teaching in Yamanishi (or the other cited prior art) that reasonably supports the conclusion that his device structure necessarily includes first and second conduction channels – much less with the first conduction channel having an impurity concentration of approximately $1 \times 10^{12}/\text{cm}^2$.

In this case, there is no logical reason apparent from the cited prior art references for a person of ordinary skill in the art to achieve first and second conduction channels in an extended drain structure in order to improve the operating characteristics of a high voltage field-effect transistor. As explained above, a reasonable expectation of success does not exist in the prior art; therefore, while it may have been obvious *to try*, it would not have been obvious *to do*. Obviousness cannot be predicated upon what a person skilled in the art might find obvious to try, but only on what the prior art would have led a person skilled in the art to do.

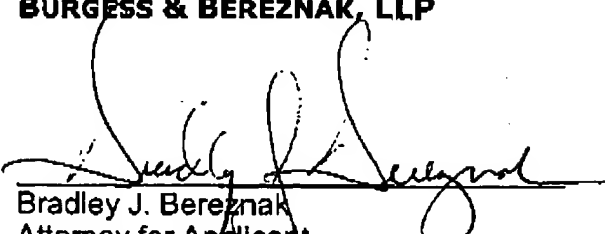
Accordingly, Applicant respectfully requests that the rejection of claims 93-111 under 35 U.S.C. § 103(a) be withdrawn.

It is respectfully submitted that all claims are now in condition for allowance.

Please charge any shortages and credit any overcharges to our Deposit
Account No. 50-2060.

Respectfully submitted,
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Dated: May 30, 2003


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MAY 30 2003

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